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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/576,146

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Klaus Kabs

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EXAMINER

BERNSHTEYN, MICHAEL

ART UNIT

PAPER NUMBER

1796

NOTIFICATION DATE

DELIVERY MODE

04/08/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/576,146	Applicant(s) KABS ET AL.	
	Examiner MICHAEL M. BERNSHTEYN	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☒ Claim(s) 4 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>04/18/2006</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claim 1 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 1; line 5 recites “the customary additives” while the specification does not disclose which additives should be considered as “customary”, which consequently raises doubt as to enablement.

2. Claims 2-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claim 2 is generally narrative and indefinite, failing to conform with current U.S. practice. It appears to be a literal translation into English from a foreign document and is replete with grammatical and idiomatic errors.

The claims 2, 3 and 6-8 are indefinite because the scope of the claims is unclear in view of the transitional phrase, "characterized in that". Is this considered open

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language, like the phrase "comprising", or closed language, like the phrase "consisting of"? For the purposes of this Office action the claims 2, 3 and 6-8 are being interpreted as having open language. It is also noted that it is preferred that each method step begin with a verb.

Claim 4 recites the limitation "Sheets of PMMA obtainable by a process of claim 1" in line 1. There is insufficient antecedent basis for this limitation in the claim because the process of claim 1 recites "...a mixture of a residual initiator-free polymethyl (meth)acrylate syrup **and** a mixture consisting of MMA and the customary additives and an olefinic carbocyclic compound", not only PMMA. For the purposes of this Office action the claim 4 is being interpreted as being dependent upon claim 3 because claim 3 has the limitation "A process for preparing a residual initiator-free polymethyl (meth)acrylate syrup".

Claim 5 provides for the use of the sheets of PMMA, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim 5 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim 8 recites "The process as claimed in claim 1, characterized in that the terpene used is γ -terpinene". There is insufficient antecedent basis for this limitation in the claim because the claim 1 does not recite any terpene. For the purposes of this Office action the claim 7 is being interpreted as being dependent upon claim 7.

Claim Objections

3. Claim 4 is objected to because of the following informalities:

Claim 4 recites the limitation "obtainable". This rationale is applicable to polymer "obtainable" by a stated process because any variation in any parameter within the scope of the claimed process would change the polymer produced. One who made or used a polymer made by a process other than the process cited in the claim would have to produce a polymer using all possible parameters within the scope of the claim, and then extensively analyze each product to determine if this polymer was obtainable by a process within the scope of the claimed process. Appropriate correction is required.

Claim 4 recites the limitation "...by a process of claim 1" instead of "...by the process of claim 1". Appropriate correction is required.

Specification

4. The specification is objected as not providing proper antecedent basis for the process for producing plastics moldings with a thickness of 30-200 mm as per claim 1.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

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not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1, 2 and 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Minghetti et al. (U. S. Patent 5,567,745) in view of Visser (U. S. Patent 5,851,606).

With regard to the limitations of claims 1, 2 and 6-8, Minghetti discloses the manufacture of acrylic sheet or slabs, that is sheets or slabs of polymethylmethacrylate ("PMMA"), of the type usable in or designed for architectural uses such as kitchen countertops and more complex shapes (col. 1, lines 13-16). Content of PMMA dissolved in MMA for obtaining of syrup preferably 15-25% by weight, which is within the claimed range (col. 3, lines 13-14; col. 4, lines 16-19). Weight average molecular weight range of PMMA is about 30,000 to about 600,000, which overlaps the claimed range (col. 4, lines 1-4).

Minghetti discloses the usage of pigments, other additives, catalysts, chain-transfer agents, and crosslinking agents (col. 5, lines 45-47).

With regard to the limitations of claims 1 and 6-8, Minghetti does not disclose the usage of an olefinic carboxylic compound, particularly terpenes and γ -terpinene.

Visser discloses that examples of suitable chain transfer agents are alkyl and aryl mercaptans such as octyl mercaptan, lauryl mercaptan and n-, s- and t-dodecyl mercaptan, glycol dimercaptoacetate, isooctylthioglycolate, triphenylmethane, trichloromethane, tetrachloromethane, methallylchloride, 1,4-cyclohexadiene, limonene,

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terpinolene and terpinenes. Terpinenes and in particular γ -terpinene have been found to be most preferable for use (col. 4, lines 2-8).

Therefore, all of the above chain transfer agents functional equivalents and can be substituted by each other. Thus, Visser recognizes the equivalency of octyl mercapran or dodecyl mercaptan used by Minghetti (col. 4, lines 65-66) and terpinenes and in particular γ -terpinene as chain transfer agents for obtaining PMMA syrup. In the instant case the substitution of equivalents chain transfer agents requires no express motivation, as long as the prior art recognize equivalency, ***In re Fount***, 213 USPQ 532 (CCPA 1982); ***In re Siebentritt***, 152 USPQ 618 (CCPA 1967); ***Graver Tank & Mfg. Co. Inc. V. Linde Air Products Co.***, 85 USPQ 328 (USSC 1950), and a person skilled in the art would have found obvious to substitute octyl mercapran or dodecyl mercaptan of Minghetti for γ -terpinene of Visser based on their recognized equivalency and with the reasonable expectation of success.

With regard to thickness of 30-200 mm instantly claimed in claim 1, the combined teaching of Minghetti and Visser is silent about it. However, in view of substantially identical process for producing plastic moldings by thermal polymerization of the mixture of PMMA/MMA syrup between Minghetti, Visser and instant claim 1, it is the examiner position that Minghetti and Visser's process possesses these properties. Since the USPTO does not have equipment to do the analytical test, the burden is now shifted to the applicant to prove otherwise. ***In re Best***, 195 USPQ 430, (CCPA 1977).

Therefore, it would have been obvious to one of ordinary skill in the art to make the polymer having the claimed properties using the claimed process because it

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appears that the reference generically embrace the claimed subject matter and the person of ordinary skill in the art would have expected all embodiments of the reference to work. Applicants have not demonstrated that the differences, if any, between the claimed subject matter and the subject matter of the prior art examples give rise to unexpected products.

6. Claims 3 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Martinez et al. (U. S. Patent Application Publication 2003/0195311).

With regard to the limitations of claim 3, Martinez discloses a process for preparing a residual initiator-free polymethyl(meth)acrylate syrup, comprising a mixture of 100 parts of MMA and 0.05-0.1 part of peroxydicarbonate, which is polymerized to conversion of 10-30% (page 3, [0042], [0047]; Examples 1 and 2, pages 4-5, [0067], Table 1).

With regard to the limitations of claim 4, Martinez discloses sheets of PMMA (page 4, [0058]).

7. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Martinez et al. (U. S. Patent Application Publication 2003/0195311) in view of Shirai et al. (U. S. Patent 5,665,514).

The disclosure of Martinez's reference resided in § 6 is incorporated herein by reference.

With regard to the limitations of claim 4, Martinez discloses that sheets of PMMA can be used for producing aquaria.

Shirai discloses that sheets of PMMA can be used for producing aquaria (col. 1, line 48; col. 8, lines 15-20).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ sheets of PMMA of Martinez for producing aquaria as taught by Shirai with reasonable expectation of success, and thus to arrive at the subject matter of instant claim 5.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL M. BERNSHTEYN whose telephone number is (571)272-2411. The examiner can normally be reached on M-Th 8-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on 571-272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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